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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,980	02/09/2004	Luc Vanmaele	27500-GN03027	9601

7590 10/18/2004

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EXAMINER

LEE, SIN J

ART UNIT	PAPER NUMBER
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1752

DATE MAILED: 10/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/774,980

Applicant(s)

VANMAELE ET AL.

Examiner

Sin J. Lee

Art Unit

1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 25-30 is/are allowed.
- 6) ☒ Claim(s) 1-9, 11, 15, 16 and 21-24 is/are rejected.
- 7) ☒ Claim(s) 10, 12-14 and 17-20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 02-09-04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

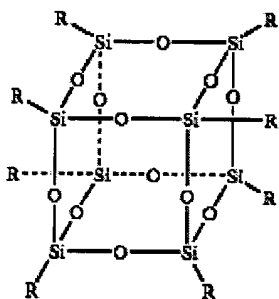
1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-9, 11, 15, 16, and 22-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Nguyen et al (US 6,664,024 B1).

Nguyen teaches (col.2, lines 44-51, col.4, lines 58-67, col.5, lines 1-18) a *photocurable* composition comprising (a) a photocurable monomer, oligomers, *dendrimers* and polymers (b) photoinitiators, (c) color generating compounds and optionally (d) non-settling functionalized reactive silsesquioxanes ("POSS") of the Formula I shown below;



where R can be *alkyl*, *cycloalkyl*, *alkoxy*, *aryl*, *polyether*, *dimethylsiloxane* and *polyether*, all of these groups *preferably* containing reactive functional groups, such as *acrylate*, *alcohol*, *epoxy*, *methacrylate*, *styryl*, and

vinyl ether, which can undergo polymerization in the presence of free radical or acid. Based on this teaching, one of ordinary skill in the art would immediately envisage using POSS where R is alkyl or aryl group containing reactive functional groups such as acrylate, , epoxy, methacrylate, or styryl group. Therefore, Nguyen teaches present POSS of claim 1 (present n being 8). Therefore, Nguyen teaches present inventions of claims 1-4, 15, and 22-24; it is the Examiner's position that Nguyen's photocurable composition would inherently be capable of being used as an ink composition (or ink-jet ink composition) and would inherently have the present viscosity range of claim 23 because the prior art's composition teaches all of the present components of claim 1.

With respect to present claims 5 and 6, Nguyen teaches (col.3, lines 24-25) that his photoinitiator system can comprise both radical and acid photoinitiators. Therefore, the prior art teaches present inventions of claims 5 and 6 (i.e., a photoinitiator and a co-initiator).

With respect to present claims 7-9 and 11, Nguyen teaches (col.4, lines 14-17) that preferably, his color generating compounds are the derivatives of triarylpyridine, xanthene and isobenzofuranone. Based on this teaching, one of ordinary skill in the art would immediately envisage using xanthene (a dye as well as a pigment) as Nguyen's color generating compound. Therefore, the prior art teaches present inventions of claims 7-9 and 11.

With respect to present claim 16, as one of the example for his photocurable monomers, oligomers, dendrimers and polymers, Nguyen teaches (see the table in

col.6 and col.6, line 37) trimethylolpropane triacrylate (a polyester acrylate). Therefore, the prior art teaches present invention of claim 16.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen et al (US 6,664,024 B1) in view of Foster et al (5,882,836).

Nguyen does not disclose present antioxidant of claim 21. However, it is well known in the art, as evidenced by Foster, col.9, lines 36-38, to add an antioxidant into a photocurable composition in order to increase the composition's oxidative stability during processing as well as in the cured product. Therefore, it would have been obvious to one of ordinary skill in the art to add an antioxidant into Nguyen's photocurable composition in order to increase the composition's oxidative stability during processing as well as in the cured product as taught by Foster. Therefore, Nguyen in view of Foster would render obvious present invention of claim 21.

Allowable Subject Matter

5. Claims 10, 12-14, and 17-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Nguyen does not teach or suggest the use of present inorganic pigment of claim 10 or the use of present pigments

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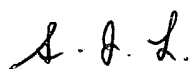
of claim 12. Nguyen does not teach or suggest the use of present vinyl ether (meth)acrylate of claim 13. Nguyen does not teach or suggest the use of a solvent as presently required in claim 17. Nguyen does not teach or suggest the use of present conducting or semiconducting polymer of claim 19.

6. Claims 25-30 are allowed. Nguyen does not teach or suggest present process of claim 25 for obtaining a colorless, monochrome or multicolor ink jet image.

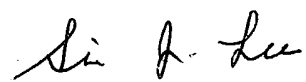
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sin J. Lee whose telephone number is 571-272-1333. The examiner can normally be reached on Monday-Friday from 9:00 am EST to 5:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly, can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



S. Lee
October 15, 2004



Sin J. Lee
Patent Examiner
Technology Center 1700